

PC 84

NANOFIBERS BY ELECTROSPINNING OF POLYMER DISPERSIONS

V. Raman¹, E. Klimov¹, W. Heckmann¹, J. Schmidt-Thümmes¹,
A. Stoilkovic², Andreas Greiner²

¹*BASF SE, Carl-Bosch-Str. 38, D-67056 Ludwigshafen, Germany*

²*Philipps-Universität Marburg, Department of Chemistry and Scientific Center for Materials Science, Hans-Meerwein-Str., D-35032 Marburg, Germany*

A new method of designing nanofibers (< 500 nm) based on electrospinning of an aqueous dispersion and a few percent of water-soluble template polymer will be presented. In this technique water stable fibers could be obtained using a completely aqueous system compared to the usual organic solvent based systems to obtain such fibers. By changing the latex parameters including particle size, T_g , cross-linking (intra and inter) and ratio of template polymer/latex the fiber morphology and properties could be tuned. These fibers could be potentially used in filtration and hygiene applications.